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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,589	02/19/2002	Tetsuya Fukunaga	09/555527US1	2701

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ALEXANDRIA, VA 22314

EXAMINER

ILDEBRANDO, CHRISTINA A

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 07/09/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/076,589

Applicant(s)

FUKUNAGA, TETSUYA

Examiner

Christina Ildebrando

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/555,527.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-4, and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang et al.

Chang et al. (US 4,344,868) discloses a process for preparing a catalyst comprising impregnating a ZSM-5 zeolite with an active metal (rhodium), vacuum-drying the impregnated zeolite in a rotary evaporator, followed by calcination (column 12, lines 28-40). It is the position of the examiner that the motion of the rotary evaporator would give to the catalyst particles a shaking force that would permit the catalyst particles to contact other catalyst particles at any time, as required by claim 8.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Chang et al.

3. Claims 1 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Matusz.

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Matusz (WO 97/13579) discloses a process for preparing a catalyst comprising impregnating a catalyst carrier with active metals, drying the impregnated carrier by continuous shaking, followed by calcination in air (page 18, line 15 – page 19, line 5). It is the position of the examiner that the continuous shaking would give to the particles a shaking force that would permit the catalyst particles to contact other catalyst particles at any time, as required by claim 8.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Matusz.

4. Claims 1-4 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukunaga et al.

Fukunaga et al. (US 6,096,936) discloses a process for preparing a reforming catalyst comprising impregnating an L-type zeolite with a platinum-containing compound and one or more halogen containing compounds and then calcining the zeolite (column 2, lines 45-51). The reference further teaches that prior to calcination, a drying treatment is carried out (column 4, lines 58-60). The drying treatment is conducted under reduced pressure or atmospheric pressure in a moving state, such as by vacuum rotary drying (column 4, lines 58-68). It is the position of the examiner that the motion of the rotary drier would give to the catalyst particles a shaking force that would permit the catalyst particles to contact other catalyst particles at any time, as required by claim 8. Refer also to Example 1 (column 6).

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Fukunaga et al.

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5. Claims 1-4 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Holtermann et al.

Holtermann et al. (US 6,207,042) discloses a process for preparing a reforming catalyst comprising impregnating an L-type zeolite with platinum and halogen compounds, followed by vacuum drying in a rotary evaporator and calcination (column 17, lines 40-55). It is the position of the examiner that the motion of the rotary evaporator would give to the catalyst particles a shaking force that would permit the catalyst particles to contact other catalyst particles at any time, as required by claim 8.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Holtermann et al.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. as applied above for claims 1, 3-4, and 7-8.

The teachings of Chang et al. are as described above for claims 1, 3-4, and 7-8.

The difference between the reference and the claims is that Chang et al. does not teach the revolution speed of the rotary evaporator, as required by claim 5.

However, one of ordinary skill would appreciate that the rate of evaporation and drying

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would be proportional to the speed of the rotary evaporator and would therefore recognize the revolution speed to be a result effective variable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215. In this case, one of ordinary skill would have been motivated to optimize the speed of the rotary evaporator taught by Chang et al. in order to effectively dry the impregnated catalyst, as taught by the reference.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al. as applied above for claims 1-4 and 7-8.

The teachings of Fukunaga et al. are as described above for claims 1-4 and 7-8.

The difference between the reference and the claims is that Fukunaga et al. does not teach the revolution speed of the rotary drier, as required by claim 5. However, one of ordinary skill would appreciate that the rate of evaporation and drying would be proportional to the speed of the rotary drier and would therefore recognize the revolution speed to be a result effective variable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215. In this case, one of ordinary skill would have been motivated to optimize the speed of

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the rotary drier taught by Fukunaga et al. in order to effectively dry the impregnated catalyst, as taught by the reference.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holtermann et al. as applied above for claims 1-4 and 7-8.

The teachings of Holtermann et al. are as described above for claims 1-4 and 7-8.

The difference between the reference and the claims is that Holtermann et al. does not teach the revolution speed of the rotary evaporator, as required by claim 5. However, one of ordinary skill would appreciate that the rate of evaporation and drying would be proportional to the speed of the rotary evaporator and would therefore recognize the revolution speed to be a result effective variable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215. In this case, one of ordinary skill would have been motivated to optimize the speed of the rotary evaporator taught by Holtermann et al. in order to effectively dry the impregnated catalyst, as taught by the reference.

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***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fukunaga et al. (US 6,518,470), Galperin (US 5,314,854), Katsuno et al. (US 4,681,865), Innes et al. (US 5,851,379) and Galperin (US 5,888,922) disclose catalyst compositions useful in reforming processes.

Weisang et al. (US 3,886,061), Hilfman (US 3,963,601), Wernli (US 4,087,385), Drake et al. (US 4,620,016), Fennemann (US 4,766,104), Hoelderich et al. (US 4,960,894), Monnier et al. (US 5,081,096), and Matsumoto et al. (US 5,800,797) all disclose processes for producing catalysts in which the impregnated carrier is rotated throughout the drying step. Refer to the examples of each of the above.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (703) 305-0469. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
Christina Ildebrando  
Examiner  
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7/7/03

CAI  
July 7, 2003